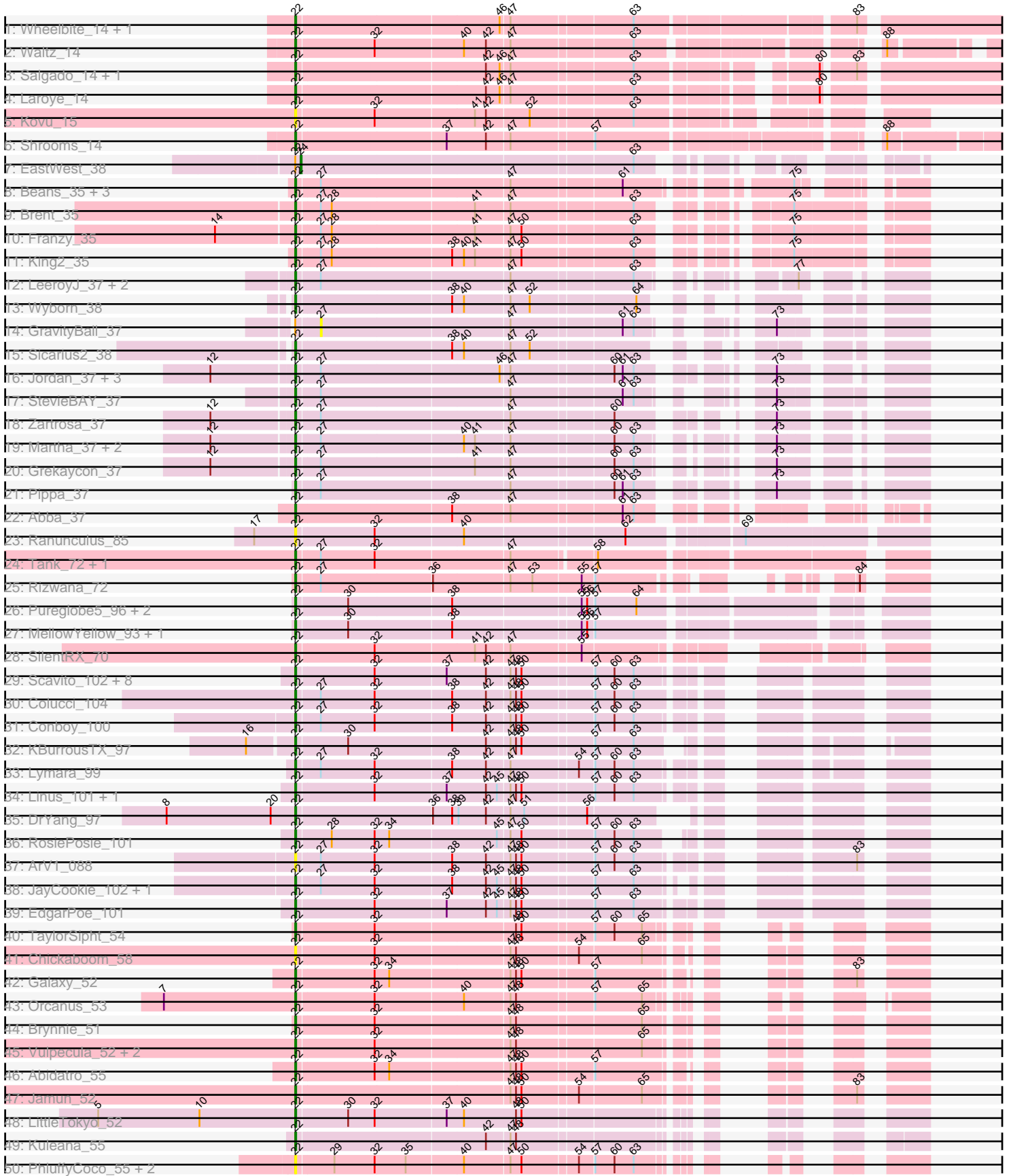
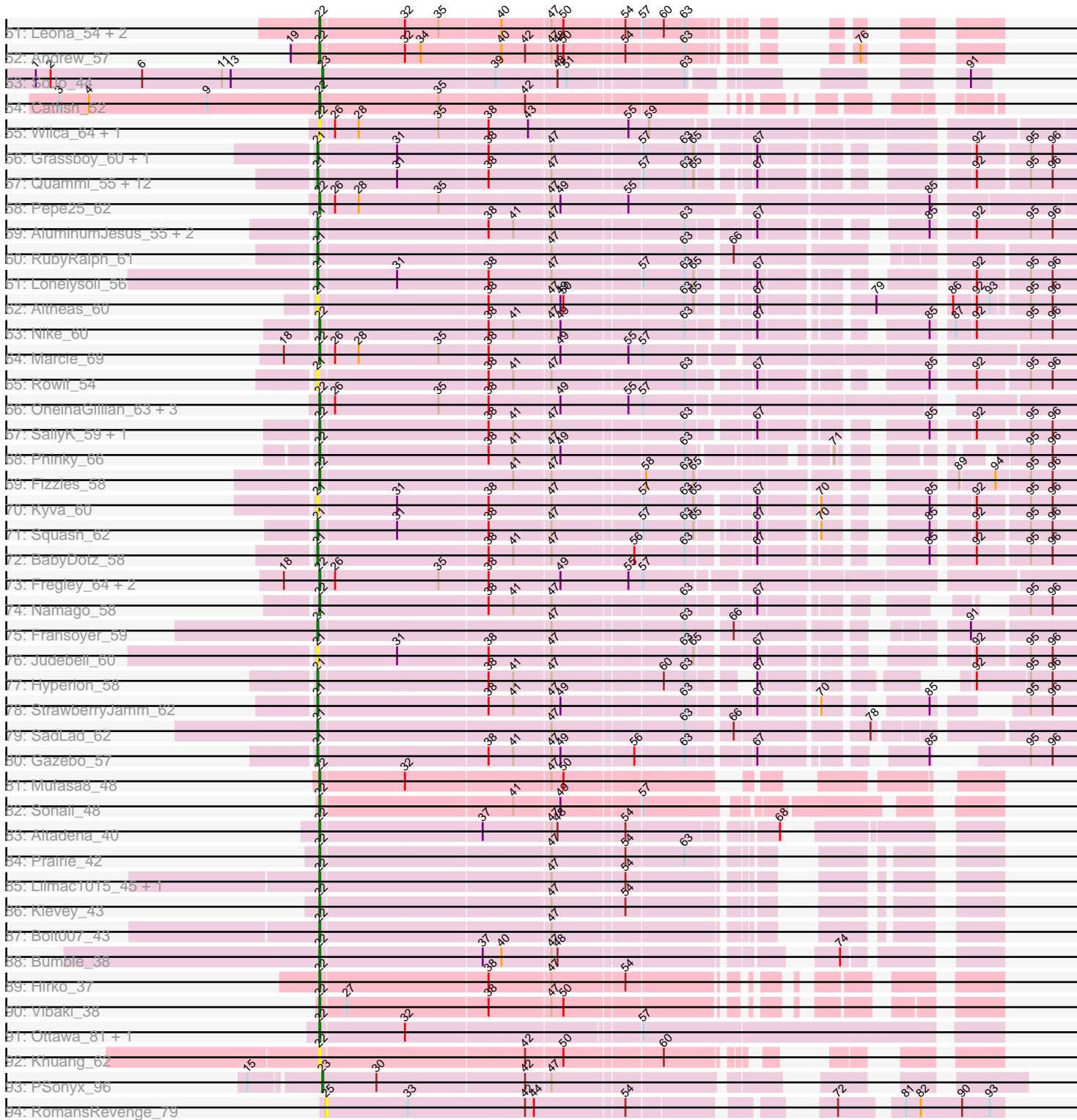


Pham 157650



Pham 157650



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 157650 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157650 has 150 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Wheelbite_14, Edmundo_14
- Track 2 : Waltz_14
- Track 3 : Salgado_14, LiSara_14
- Track 4 : Laroye_14
- Track 5 : Kovu_15
- Track 6 : Shrooms_14
- Track 7 : EastWest_38
- Track 8 : Beans_35, Jawnski_35, Piccoletto_35, NathanVaag_35
- Track 9 : Brent_35
- Track 10 : Franzy_35
- Track 11 : King2_35
- Track 12 : LeeroyJ_37, BarretLemon_37, Timinator_37
- Track 13 : Wyborn_38
- Track 14 : GravityBall_37
- Track 15 : Sicarius2_38
- Track 16 : Jordan_37, Sonny_37, JKerns_37, Shade_37
- Track 17 : StevieBAY_37
- Track 18 : Zartrosa_37
- Track 19 : Martha_37, BossLady_37, TaeYoung_37
- Track 20 : Grekaycon_37
- Track 21 : Pippa_37
- Track 22 : Abba_37
- Track 23 : Ranunculus_85
- Track 24 : Tank_72, Wilde_74
- Track 25 : Rizwana_72
- Track 26 : Pureglobe5_96, Odyssey395_96, Pointis_92
- Track 27 : MellowYellow_93, Beagle_98
- Track 28 : SilentRX_70
- Track 29 : Scavito_102, PrincessTrina_102, Chipper1996_1020, JaNo_100, Mordred_101, Chubster_101, HumptyDumpty_101, Tophat_102, Kabreeze_101
- Track 30 : Colucci_104
- Track 31 : Conboy_100
- Track 32 : KBurrousTX_97
- Track 33 : Lymara_99
- Track 34 : Linus_101, Chocolat_101
- Track 35 : DrYang_97
- Track 36 : RosiePosie_101

- Track 37 : ArV1_088
- Track 38 : JayCookie_102, MoyaNatalis_101
- Track 39 : EdgarPoe_101
- Track 40 : TaylorSipht_54
- Track 41 : Chickaboom_58
- Track 42 : Galaxy_52
- Track 43 : Orcanus_53
- Track 44 : Brynnie_51
- Track 45 : Vulpecula_52, Basilisk_53, Ruchi_52
- Track 46 : Abidatro_55
- Track 47 : Jamun_52
- Track 48 : LittleTokyo_52
- Track 49 : Kuleana_55
- Track 50 : PhluffyCoco_55, Juno112_55, KHumphrey_54
- Track 51 : Leona_54, RedFox_55, Renna12_54
- Track 52 : Andrew_57
- Track 53 : SoJo_44
- Track 54 : Catfish_52
- Track 55 : Wilca_64, BirdInFrench_64
- Track 56 : Grassboy_60, Tissue_58
- Track 57 : Quammi_55, Wheelie_57, Casend_58, Llemily_57, Sillytadpoles_58, DonaldDuck_57, Viceroy_56, Jehoshaphat_59, Zhafia_60, Rudy_55, Wayne3_59, Phabia_57, Teehee_58
- Track 58 : Pepe25_62
- Track 59 : AluminumJesus_55, Blab_56, Mashley_58
- Track 60 : RubyRalph_61
- Track 61 : Lonelysoil_56
- Track 62 : Altheas_60
- Track 63 : Nike_60
- Track 64 : Marcie_69
- Track 65 : Rowlf_54
- Track 66 : OneinaGillian_63, CandC_62, Romm_65, RobinRose_65
- Track 67 : SallyK_59, Zagie_58
- Track 68 : Phinky_66
- Track 69 : Fizzles_58
- Track 70 : Kyva_60
- Track 71 : Squash_62
- Track 72 : BabyDotz_58
- Track 73 : Fregley_64, Tempo_64, Kelcole_62
- Track 74 : Namago_58
- Track 75 : Fransoyer_59
- Track 76 : Judebell_60
- Track 77 : Hyperion_58
- Track 78 : StrawberryJamm_62
- Track 79 : SadLad_62
- Track 80 : Gazebo_57
- Track 81 : Mufasa8_48
- Track 82 : Sonali_48
- Track 83 : Altadena_40
- Track 84 : Prairie_42
- Track 85 : Lilmac1015_45, CalWood4100_45
- Track 86 : Klevey_43
- Track 87 : Bolt007_43

- Track 88 : Bumble_38
- Track 89 : Hirko_37
- Track 90 : Vibaki_38
- Track 91 : Ottawa_81, Kharcho_81
- Track 92 : Khuang_62
- Track 93 : PSonyx_96
- Track 94 : RomansRevenge_79

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 22, it was called in 98 of the 123 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abba_37, Abidatro_55, Altadena_40, Andrew_57, ArV1_088, BarretLemon_37, Basilisk_53, Beagle_98, Beans_35, BirdInFrench_64, Bolt007_43, BossLady_37, Brent_35, Brynnie_51, Bumble_38, CalWood4100_45, CandC_62, Catfish_52, Chickaboom_58, Chipper1996_1020, Chocolat_101, Chubster_101, Colucci_104, Conboy_100, DrYang_97, EdgarPoe_101, Edmundo_14, Fizzles_58, Franzy_35, Fregley_64, Galaxy_52, Grekaycon_37, Hirko_37, HumptyDumpty_101, JKerns_37, JaNo_100, Jamun_52, Jawnski_35, JayCookie_102, Jordan_37, Juno112_55, KBurrousTX_97, KHumphrey_54, Kabreeze_101, Kelcole_62, Kharcho_81, Khuang_62, King2_35, Klevey_43, Kovu_15, Kuleana_55, Laroye_14, LeeroyJ_37, Leona_54, LiSara_14, Lilmac1015_45, Linus_101, LittleTokyo_52, Lymara_99, Marcie_69, Martha_37, MellowYellow_93, Mordred_101, MoyaNatalis_101, Mufasa8_48, Namago_58, NathanVaag_35, Nike_60, Odyssey395_96, OneinaGillian_63, Orcanus_53, Ottawa_81, Pepe25_62, Phinky_66, PhluffyCoco_55, Piccoletto_35, Pippa_37, Pointis_92, Prairie_42, PrincessTrina_102, Pureglobe5_96, Ranunculus_85, RedFox_55, Renna12_54, Rizwana_72, RobinRose_65, Romm_65, RosiePosie_101, Ruchi_52, Salgado_14, SallyK_59, Scavito_102, Shade_37, Shrooms_14, Sicarius2_38, SilentRX_70, Sonali_48, Sonny_37, StevieBAY_37, TaeYoung_37, Tank_72, TaylorSipht_54, Tempo_64, Timinator_37, Tophat_102, Vibaki_38, Vulpecula_52, Waltz_14, Wheelbite_14, Wilca_64, Wilde_74, Wyborn_38, Zagie_58, Zartrosa_37,

Genes that have the "Most Annotated" start but do not call it:

- EastWest_38, GravityBall_37,

Genes that do not have the "Most Annotated" start:

- Altheas_60, AluminumJesus_55, BabyDotz_58, Blab_56, Casend_58, DonaldDuck_57, Fransoyer_59, Gazebo_57, Grassboy_60, Hyperion_58, Jehoshaphat_59, Judebell_60, Kyva_60, Lemily_57, Lonelysoil_56, Mashley_58, PSonyx_96, Phabia_57, Quammi_55, RomansRevenge_79, Rowlf_54, RubyRalph_61, Rudy_55, SadLad_62, Sillytadpoles_58, SoJo_44, Squash_62, StrawberryJamm_62, Teehee_58, Tissue_58, Viceroy_56, Wayne3_59, Wheelie_57, Zhafia_60,

Summary by start number:

Start 21:

- Found in 31 of 150 (20.7%) of genes in pham
- Manual Annotations of this start: 22 of 123
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas_60 (EG), AluminumJesus_55 (EG), BabyDotz_58 (EG), Blab_56 (EG), Casend_58 (EG), DonaldDuck_57 (EG), Fransoyer_59 (EG), Gazebo_57 (EG), Grassboy_60 (EG), Hyperion_58 (EG), Jehoshaphat_59 (EG), Judebell_60 (EG), Kyva_60 (EG), Llemily_57 (EG), Lonelysoil_56 (EG), Mashley_58 (EG), Phabia_57 (EG), Quammi_55 (EG), Rowlf_54 (EG), RubyRalph_61 (EG), Rudy_55 (EG), SadLad_62 (EG), Sillytadpoles_58 (EG), Squash_62 (EG), StrawberryJamm_62 (EG), Teehee_58 (EG), Tissue_58 (EG), Viceroy_56 (EG), Wayne3_59 (EG), Wheelie_57 (EG), Zhafia_60 (EG),

Start 22:

- Found in 116 of 150 (77.3%) of genes in pham
- Manual Annotations of this start: 98 of 123
- Called 98.3% of time when present
- Phage (with cluster) where this start called: Abba_37 (AO3), Abidatro_55 (AS1), Altadena_40 (FH), Andrew_57 (AS3), ArV1_088 (AR), BarretLemon_37 (AO2), Basilisk_53 (AS1), Beagle_98 (AP2), Beans_35 (AO1), BirdInFrench_64 (EG), Bolt007_43 (FH), BossLady_37 (AO2), Brent_35 (AO1), Brynnie_51 (AS1), Bumble_38 (FH), CalWood4100_45 (FH), CandC_62 (EG), Catfish_52 (CU5), Chickaboom_58 (AS1), Chipper1996_1020 (AR), Chocolat_101 (AR), Chubster_101 (AR), Colucci_104 (AR), Conboy_100 (AR), DrYang_97 (AR), EdgarPoe_101 (AR), Edmundo_14 (AL), Fizzles_58 (EG), Franzy_35 (AO1), Fregley_64 (EG), Galaxy_52 (AS1), Grekaycon_37 (AO2), Hirko_37 (FL), HumptyDumpty_101 (AR), JKerns_37 (AO2), JaNo_100 (AR), Jamun_52 (AS1), Jawnski_35 (AO1), JayCookie_102 (AR), Jordan_37 (AO2), Juno112_55 (AS3), KBurrousTX_97 (AR), KHumphrey_54 (AS3), Kabreeze_101 (AR), Kelcole_62 (EG), Kharcho_81 (FM), Khuang_62 (UNK), King2_35 (AO1), Klevey_43 (FH), Kovu_15 (AL), Kuleana_55 (AS2), Laroye_14 (AL), LeeroyJ_37 (AO2), Leona_54 (AS3), LiSara_14 (AL), Lilmac1015_45 (FH), Linus_101 (AR), LittleTokyo_52 (AS2), Lymara_99 (AR), Marcie_69 (EG), Martha_37 (AO2), MellowYellow_93 (AP2), Mordred_101 (AR), MoyaNatalis_101 (AR), Mufasa8_48 (FG), Namago_58 (EG), NathanVaag_35 (AO1), Nike_60 (EG), Odyssey395_96 (AP2), OneinaGillian_63 (EG), Orcanus_53 (AS1), Ottawa_81 (FM), Pepe25_62 (EG), Phinky_66 (EG), PhluffyCoco_55 (AS3), Piccoletto_35 (AO1), Pippa_37 (AO2), Pointis_92 (AP2), Prairie_42 (FH), PrincessTrina_102 (AR), Pureglobe5_96 (AP2), Ranunculus_85 (AP), RedFox_55 (AS3), Renna12_54 (AS3), Rizwana_72 (AP1), RobinRose_65 (EG), Romm_65 (EG), RosiePosie_101 (AR), Ruchi_52 (AS1), Salgado_14 (AL), SallyK_59 (EG), Scavito_102 (AR), Shade_37 (AO2), Shrooms_14 (AL), Sicarius2_38 (AO2), SilentRX_70 (AP4), Sonali_48 (FG), Sonny_37 (AO2), StevieBAY_37 (AO2), TaeYoung_37 (AO2), Tank_72 (AP1), TaylorSipht_54 (AS1), Tempo_64 (EG), Timinator_37 (AO2), Tophat_102 (AR), Vibaki_38 (FL), Vulpecula_52 (AS1), Waltz_14 (AL), Wheelbite_14 (AL), Wilca_64 (EG), Wilde_74 (AP1), Wyborn_38 (AO2), Zagie_58 (EG), Zartrosa_37 (AO2),

Start 23:

- Found in 2 of 150 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 123
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PSonyx_96 (singleton), SoJo_44 (BC1),

Start 24:

- Found in 1 of 150 (0.7%) of genes in pham

- Manual Annotations of this start: 1 of 123
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EastWest_38 (AO),

Start 25:

- Found in 1 of 150 (0.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RomansRevenge_79 (singleton),

Start 27:

- Found in 32 of 150 (21.3%) of genes in pham
- No Manual Annotations of this start.
- Called 3.1% of time when present
- Phage (with cluster) where this start called: GravityBall_37 (AO2),

Summary by clusters:

There are 22 clusters represented in this pham: singleton, AP2, AP1, AP4, FG, FH, FL, FM, CU5, AS3, AS2, AS1, EG, AL, AO, AP, AR, AO3, AO2, AO1, UNK, BC1,

Info for manual annotations of cluster AL:

- Start number 22 was manually annotated 7 times for cluster AL.

Info for manual annotations of cluster AO:

- Start number 24 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 22 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 22 was manually annotated 16 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 22 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster AP1:

- Start number 22 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 22 was manually annotated 3 times for cluster AP2.

Info for manual annotations of cluster AP4:

- Start number 22 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AR:

- Start number 22 was manually annotated 18 times for cluster AR.

Info for manual annotations of cluster AS1:

- Start number 22 was manually annotated 9 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 22 was manually annotated 2 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 22 was manually annotated 4 times for cluster AS3.

Info for manual annotations of cluster BC1:

- Start number 23 was manually annotated 1 time for cluster BC1.

Info for manual annotations of cluster CU5:

- Start number 22 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster EG:

- Start number 21 was manually annotated 22 times for cluster EG.
- Start number 22 was manually annotated 14 times for cluster EG.

Info for manual annotations of cluster FG:

- Start number 22 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster FH:

- Start number 22 was manually annotated 6 times for cluster FH.

Info for manual annotations of cluster FL:

- Start number 22 was manually annotated 2 times for cluster FL.

Info for manual annotations of cluster FM:

- Start number 22 was manually annotated 2 times for cluster FM.

Gene Information:

Gene: Abba_37 Start: 29639, Stop: 30190, Start Num: 22

Candidate Starts for Abba_37:

(Start: 22 @29639 has 98 MA's), (38, 29804), (47, 29864), (61, 29978), (63, 29990),

Gene: Abidatro_55 Start: 34615, Stop: 35133, Start Num: 22

Candidate Starts for Abidatro_55:

(Start: 22 @34615 has 98 MA's), (32, 34696), (34, 34711), (47, 34837), (48, 34843), (50, 34849), (57, 34921),

Gene: Altadena_40 Start: 29404, Stop: 29982, Start Num: 22

Candidate Starts for Altadena_40:

(Start: 22 @29404 has 98 MA's), (37, 29560), (47, 29626), (48, 29632), (54, 29695), (68, 29821),

Gene: Altheas_60 Start: 43871, Stop: 43149, Start Num: 21

Candidate Starts for Altheas_60:

(Start: 21 @43871 has 22 MA's), (38, 43709), (47, 43649), (49, 43640), (50, 43637), (63, 43523), (65, 43514), (67, 43472), (79, 43379), (86, 43313), (92, 43292), (93, 43280), (95, 43247), (96, 43226),

Gene: AluminumJesus_55 Start: 42828, Stop: 42118, Start Num: 21

Candidate Starts for AluminumJesus_55:

(Start: 21 @42828 has 22 MA's), (38, 42666), (41, 42642), (47, 42606), (63, 42480), (67, 42423), (85, 42297), (92, 42264), (95, 42210), (96, 42189),

Gene: Andrew_57 Start: 33845, Stop: 34357, Start Num: 22

Candidate Starts for Andrew_57:

(19, 33827), (Start: 22 @33845 has 98 MA's), (32, 33926), (34, 33941), (40, 34019), (42, 34043), (47, 34067), (48, 34073), (50, 34079), (54, 34136), (63, 34193), (76, 34271),

Gene: ArV1_088 Start: 62726, Stop: 63295, Start Num: 22

Candidate Starts for ArV1_088:

(Start: 22 @62726 has 98 MA's), (27, 62750), (32, 62807), (38, 62888), (42, 62924), (47, 62948), (48, 62954), (50, 62960), (57, 63032), (60, 63053), (63, 63074), (83, 63242),

Gene: BabyDotz_58 Start: 44301, Stop: 43588, Start Num: 21

Candidate Starts for BabyDotz_58:

(Start: 21 @44301 has 22 MA's), (38, 44139), (41, 44115), (47, 44079), (56, 44001), (63, 43953), (67, 43899), (85, 43773), (92, 43737), (95, 43689), (96, 43668),

Gene: BarretLemon_37 Start: 30898, Stop: 31434, Start Num: 22

Candidate Starts for BarretLemon_37:

(Start: 22 @30898 has 98 MA's), (27, 30922), (47, 31120), (63, 31246), (77, 31342),

Gene: Basilisk_53 Start: 33835, Stop: 34356, Start Num: 22

Candidate Starts for Basilisk_53:

(Start: 22 @33835 has 98 MA's), (32, 33916), (47, 34057), (48, 34063), (65, 34192),

Gene: Beagle_98 Start: 57722, Stop: 57117, Start Num: 22

Candidate Starts for Beagle_98:

(Start: 22 @57722 has 98 MA's), (30, 57668), (38, 57560), (55, 57428), (56, 57422), (57, 57416),

Gene: Beans_35 Start: 30601, Stop: 31176, Start Num: 22

Candidate Starts for Beans_35:

(Start: 22 @30601 has 98 MA's), (27, 30625), (47, 30823), (61, 30937), (75, 31081),

Gene: BirdInFrench_64 Start: 43759, Stop: 43046, Start Num: 22

Candidate Starts for BirdInFrench_64:

(Start: 22 @43759 has 98 MA's), (26, 43747), (28, 43723), (35, 43642), (38, 43594), (43, 43555), (55, 43456), (59, 43435),

Gene: Blab_56 Start: 43444, Stop: 42740, Start Num: 21

Candidate Starts for Blab_56:

(Start: 21 @43444 has 22 MA's), (38, 43282), (41, 43258), (47, 43222), (63, 43096), (67, 43042), (85, 42916), (92, 42883), (95, 42829), (96, 42808),

Gene: Bolt007_43 Start: 32404, Stop: 32961, Start Num: 22

Candidate Starts for Bolt007_43:

(Start: 22 @32404 has 98 MA's), (47, 32626),

Gene: BossLady_37 Start: 30876, Stop: 31424, Start Num: 22

Candidate Starts for BossLady_37:

(12, 30789), (Start: 22 @30876 has 98 MA's), (27, 30900), (40, 31050), (41, 31062), (47, 31098), (60, 31203), (63, 31224), (73, 31308),

Gene: Brent_35 Start: 30565, Stop: 31143, Start Num: 22
Candidate Starts for Brent_35:
(Start: 22 @30565 has 98 MA's), (27, 30589), (28, 30601), (41, 30751), (47, 30787), (63, 30913), (75, 31024),

Gene: Brynnie_51 Start: 33460, Stop: 33981, Start Num: 22
Candidate Starts for Brynnie_51:
(Start: 22 @33460 has 98 MA's), (32, 33541), (47, 33682), (48, 33688), (65, 33817),

Gene: Bumble_38 Start: 29473, Stop: 30051, Start Num: 22
Candidate Starts for Bumble_38:
(Start: 22 @29473 has 98 MA's), (37, 29629), (40, 29647), (47, 29695), (48, 29701), (74, 29926),

Gene: CalWood4100_45 Start: 31895, Stop: 32452, Start Num: 22
Candidate Starts for CalWood4100_45:
(Start: 22 @31895 has 98 MA's), (47, 32117), (54, 32186),

Gene: CandC_62 Start: 42994, Stop: 42269, Start Num: 22
Candidate Starts for CandC_62:
(Start: 22 @42994 has 98 MA's), (26, 42982), (35, 42877), (38, 42829), (49, 42760), (55, 42691), (57, 42676),

Gene: Casend_58 Start: 43670, Stop: 42972, Start Num: 21
Candidate Starts for Casend_58:
(Start: 21 @43670 has 22 MA's), (31, 43595), (38, 43508), (47, 43448), (57, 43364), (63, 43322), (65, 43313), (67, 43271), (92, 43112), (95, 43064), (96, 43043),

Gene: Catfish_52 Start: 36484, Stop: 37020, Start Num: 22
Candidate Starts for Catfish_52:
(3, 36223), (4, 36253), (9, 36373), (Start: 22 @36484 has 98 MA's), (35, 36601), (42, 36685),

Gene: Chickaboom_58 Start: 34174, Stop: 34692, Start Num: 22
Candidate Starts for Chickaboom_58:
(Start: 22 @34174 has 98 MA's), (32, 34255), (47, 34396), (48, 34402), (54, 34465), (65, 34531),

Gene: Chipper1996_1020 Start: 64351, Stop: 64920, Start Num: 22
Candidate Starts for Chipper1996_1020:
(Start: 22 @64351 has 98 MA's), (32, 64432), (37, 64507), (42, 64549), (47, 64573), (48, 64579), (50, 64585), (57, 64657), (60, 64678), (63, 64699),

Gene: Chocolat_101 Start: 64058, Stop: 64627, Start Num: 22
Candidate Starts for Chocolat_101:
(Start: 22 @64058 has 98 MA's), (32, 64139), (37, 64214), (42, 64256), (45, 64268), (47, 64280), (48, 64286), (50, 64292), (57, 64364), (60, 64385), (63, 64406),

Gene: Chubster_101 Start: 64298, Stop: 64867, Start Num: 22
Candidate Starts for Chubster_101:
(Start: 22 @64298 has 98 MA's), (32, 64379), (37, 64454), (42, 64496), (47, 64520), (48, 64526), (50, 64532), (57, 64604), (60, 64625), (63, 64646),

Gene: Colucci_104 Start: 64674, Stop: 65246, Start Num: 22
Candidate Starts for Colucci_104:

(Start: 22 @64674 has 98 MA's), (27, 64698), (32, 64755), (38, 64836), (42, 64872), (47, 64896), (48, 64902), (50, 64908), (57, 64980), (60, 65001), (63, 65022),

Gene: Conboy_100 Start: 63864, Stop: 64433, Start Num: 22

Candidate Starts for Conboy_100:

(Start: 22 @63864 has 98 MA's), (27, 63888), (32, 63945), (38, 64026), (42, 64062), (47, 64086), (48, 64092), (50, 64098), (57, 64170), (60, 64191), (63, 64212),

Gene: DonaldDuck_57 Start: 43019, Stop: 42321, Start Num: 21

Candidate Starts for DonaldDuck_57:

(Start: 21 @43019 has 22 MA's), (31, 42944), (38, 42857), (47, 42797), (57, 42713), (63, 42671), (65, 42662), (67, 42620), (92, 42461), (95, 42413), (96, 42392),

Gene: DrYang_97 Start: 63553, Stop: 64098, Start Num: 22

Candidate Starts for DrYang_97:

(8, 63412), (20, 63526), (Start: 22 @63553 has 98 MA's), (36, 63694), (38, 63715), (39, 63721), (42, 63751), (47, 63775), (51, 63790), (56, 63853),

Gene: EastWest_38 Start: 30167, Stop: 30706, Start Num: 24

Candidate Starts for EastWest_38:

(Start: 22 @30161 has 98 MA's), (Start: 24 @30167 has 1 MA's), (63, 30512),

Gene: EdgarPoe_101 Start: 64215, Stop: 64784, Start Num: 22

Candidate Starts for EdgarPoe_101:

(Start: 22 @64215 has 98 MA's), (32, 64296), (37, 64371), (42, 64413), (45, 64425), (47, 64437), (48, 64443), (50, 64449), (57, 64521), (63, 64563),

Gene: Edmundo_14 Start: 9885, Stop: 10643, Start Num: 22

Candidate Starts for Edmundo_14:

(Start: 22 @9885 has 98 MA's), (46, 10098), (47, 10107), (63, 10233), (83, 10446),

Gene: Fizzles_58 Start: 43354, Stop: 42620, Start Num: 22

Candidate Starts for Fizzles_58:

(Start: 22 @43354 has 98 MA's), (41, 43168), (47, 43132), (58, 43045), (63, 43006), (65, 42997), (89, 42787), (94, 42754), (95, 42721), (96, 42700),

Gene: Fransoyer_59 Start: 45054, Stop: 44338, Start Num: 21

Candidate Starts for Fransoyer_59:

(Start: 21 @45054 has 22 MA's), (47, 44832), (63, 44706), (66, 44664), (91, 44484),

Gene: Franzy_35 Start: 30564, Stop: 31142, Start Num: 22

Candidate Starts for Franzy_35:

(14, 30480), (Start: 22 @30564 has 98 MA's), (27, 30588), (28, 30600), (41, 30750), (47, 30786), (50, 30798), (63, 30912), (75, 31023),

Gene: Fregley_64 Start: 43164, Stop: 42451, Start Num: 22

Candidate Starts for Fregley_64:

(18, 43200), (Start: 22 @43164 has 98 MA's), (26, 43152), (35, 43047), (38, 42999), (49, 42930), (55, 42861), (57, 42846),

Gene: Galaxy_52 Start: 33030, Stop: 33548, Start Num: 22

Candidate Starts for Galaxy_52:

(Start: 22 @33030 has 98 MA's), (32, 33111), (34, 33126), (47, 33252), (48, 33258), (50, 33264), (57, 33336), (83, 33495),

Gene: Gazebo_57 Start: 43512, Stop: 42829, Start Num: 21

Candidate Starts for Gazebo_57:

(Start: 21 @43512 has 22 MA's), (38, 43350), (41, 43326), (47, 43290), (49, 43281), (56, 43212), (63, 43164), (67, 43110), (85, 42984), (95, 42930), (96, 42909),

Gene: Grassboy_60 Start: 43901, Stop: 43191, Start Num: 21

Candidate Starts for Grassboy_60:

(Start: 21 @43901 has 22 MA's), (31, 43826), (38, 43739), (47, 43679), (57, 43595), (63, 43553), (65, 43544), (67, 43499), (92, 43340), (95, 43292), (96, 43271),

Gene: GravityBall_37 Start: 30922, Stop: 31446, Start Num: 27

Candidate Starts for GravityBall_37:

(Start: 22 @30898 has 98 MA's), (27, 30922), (47, 31120), (61, 31234), (63, 31246), (73, 31324),

Gene: Grekaycon_37 Start: 30822, Stop: 31370, Start Num: 22

Candidate Starts for Grekaycon_37:

(12, 30735), (Start: 22 @30822 has 98 MA's), (27, 30846), (41, 31008), (47, 31044), (60, 31149), (63, 31170), (73, 31254),

Gene: Hirko_37 Start: 32245, Stop: 32802, Start Num: 22

Candidate Starts for Hirko_37:

(Start: 22 @32245 has 98 MA's), (38, 32407), (47, 32467), (54, 32536),

Gene: HumptyDumpty_101 Start: 64018, Stop: 64587, Start Num: 22

Candidate Starts for HumptyDumpty_101:

(Start: 22 @64018 has 98 MA's), (32, 64099), (37, 64174), (42, 64216), (47, 64240), (48, 64246), (50, 64252), (57, 64324), (60, 64345), (63, 64366),

Gene: Hyperion_58 Start: 43687, Stop: 43004, Start Num: 21

Candidate Starts for Hyperion_58:

(Start: 21 @43687 has 22 MA's), (38, 43525), (41, 43501), (47, 43465), (60, 43360), (63, 43339), (67, 43297), (92, 43156), (95, 43105), (96, 43084),

Gene: JKerns_37 Start: 30786, Stop: 31343, Start Num: 22

Candidate Starts for JKerns_37:

(12, 30699), (Start: 22 @30786 has 98 MA's), (27, 30810), (46, 30999), (47, 31008), (60, 31113), (61, 31122), (63, 31134), (73, 31227),

Gene: JaNo_100 Start: 63989, Stop: 64558, Start Num: 22

Candidate Starts for JaNo_100:

(Start: 22 @63989 has 98 MA's), (32, 64070), (37, 64145), (42, 64187), (47, 64211), (48, 64217), (50, 64223), (57, 64295), (60, 64316), (63, 64337),

Gene: Jamun_52 Start: 34262, Stop: 34783, Start Num: 22

Candidate Starts for Jamun_52:

(Start: 22 @34262 has 98 MA's), (47, 34484), (48, 34490), (50, 34496), (54, 34553), (65, 34619), (83, 34730),

Gene: Jawnski_35 Start: 30570, Stop: 31145, Start Num: 22

Candidate Starts for Jawnski_35:

(Start: 22 @30570 has 98 MA's), (27, 30594), (47, 30792), (61, 30906), (75, 31050),

Gene: JayCookie_102 Start: 64608, Stop: 65165, Start Num: 22

Candidate Starts for JayCookie_102:

(Start: 22 @64608 has 98 MA's), (27, 64632), (32, 64689), (38, 64770), (42, 64806), (45, 64818), (47, 64830), (48, 64836), (50, 64842), (57, 64914), (63, 64956),

Gene: Jehoshaphat_59 Start: 43938, Stop: 43240, Start Num: 21

Candidate Starts for Jehoshaphat_59:

(Start: 21 @43938 has 22 MA's), (31, 43863), (38, 43776), (47, 43716), (57, 43632), (63, 43590), (65, 43581), (67, 43539), (92, 43380), (95, 43332), (96, 43311),

Gene: Jordan_37 Start: 30836, Stop: 31393, Start Num: 22

Candidate Starts for Jordan_37:

(12, 30749), (Start: 22 @30836 has 98 MA's), (27, 30860), (46, 31049), (47, 31058), (60, 31163), (61, 31172), (63, 31184), (73, 31277),

Gene: Judebell_60 Start: 43387, Stop: 42686, Start Num: 21

Candidate Starts for Judebell_60:

(Start: 21 @43387 has 22 MA's), (31, 43312), (38, 43225), (47, 43165), (63, 43039), (65, 43030), (67, 42985), (92, 42826), (95, 42778), (96, 42757),

Gene: Juno112_55 Start: 33508, Stop: 34017, Start Num: 22

Candidate Starts for Juno112_55:

(Start: 22 @33508 has 98 MA's), (29, 33547), (32, 33589), (35, 33622), (40, 33682), (47, 33730), (50, 33742), (54, 33799), (57, 33814), (60, 33835), (63, 33856),

Gene: KBurrousTX_97 Start: 64742, Stop: 65284, Start Num: 22

Candidate Starts for KBurrousTX_97:

(16, 64694), (Start: 22 @64742 has 98 MA's), (30, 64796), (42, 64940), (47, 64964), (48, 64970), (50, 64976), (57, 65048), (63, 65090),

Gene: KHumphrey_54 Start: 33396, Stop: 33905, Start Num: 22

Candidate Starts for KHumphrey_54:

(Start: 22 @33396 has 98 MA's), (29, 33435), (32, 33477), (35, 33510), (40, 33570), (47, 33618), (50, 33630), (54, 33687), (57, 33702), (60, 33723), (63, 33744),

Gene: Kabreeze_101 Start: 64075, Stop: 64644, Start Num: 22

Candidate Starts for Kabreeze_101:

(Start: 22 @64075 has 98 MA's), (32, 64156), (37, 64231), (42, 64273), (47, 64297), (48, 64303), (50, 64309), (57, 64381), (60, 64402), (63, 64423),

Gene: Kelcole_62 Start: 43226, Stop: 42510, Start Num: 22

Candidate Starts for Kelcole_62:

(18, 43262), (Start: 22 @43226 has 98 MA's), (26, 43214), (35, 43109), (38, 43061), (49, 42992), (55, 42923), (57, 42908),

Gene: Kharcho_81 Start: 48261, Stop: 48899, Start Num: 22

Candidate Starts for Kharcho_81:

(Start: 22 @48261 has 98 MA's), (32, 48342), (57, 48564),

Gene: Khuang_62 Start: 36400, Stop: 36924, Start Num: 22

Candidate Starts for Khuang_62:

(Start: 22 @36400 has 98 MA's), (42, 36598), (50, 36634), (60, 36727),

Gene: King2_35 Start: 30559, Stop: 31137, Start Num: 22

Candidate Starts for King2_35:

(Start: 22 @30559 has 98 MA's), (27, 30583), (28, 30595), (38, 30721), (40, 30733), (41, 30745), (47, 30781), (50, 30793), (63, 30907), (75, 31018),

Gene: Klevey_43 Start: 31378, Stop: 31935, Start Num: 22

Candidate Starts for Klevey_43:

(Start: 22 @31378 has 98 MA's), (47, 31600), (54, 31669),

Gene: Kovu_15 Start: 9876, Stop: 10469, Start Num: 22

Candidate Starts for Kovu_15:

(Start: 22 @9876 has 98 MA's), (32, 9957), (41, 10062), (42, 10074), (52, 10119), (63, 10224),

Gene: Kuleana_55 Start: 32730, Stop: 33242, Start Num: 22

Candidate Starts for Kuleana_55:

(Start: 22 @32730 has 98 MA's), (42, 32928), (47, 32952), (48, 32958),

Gene: Kyva_60 Start: 43924, Stop: 43214, Start Num: 21

Candidate Starts for Kyva_60:

(Start: 21 @43924 has 22 MA's), (31, 43849), (38, 43762), (47, 43702), (57, 43618), (63, 43576), (65, 43567), (67, 43522), (70, 43471), (85, 43396), (92, 43363), (95, 43315), (96, 43294),

Gene: Laroye_14 Start: 9623, Stop: 10354, Start Num: 22

Candidate Starts for Laroye_14:

(Start: 22 @9623 has 98 MA's), (42, 9821), (46, 9836), (47, 9845), (63, 9971), (80, 10127),

Gene: LeeroyJ_37 Start: 30897, Stop: 31436, Start Num: 22

Candidate Starts for LeeroyJ_37:

(Start: 22 @30897 has 98 MA's), (27, 30921), (47, 31119), (63, 31245), (77, 31344),

Gene: Leona_54 Start: 33587, Stop: 34099, Start Num: 22

Candidate Starts for Leona_54:

(Start: 22 @33587 has 98 MA's), (32, 33668), (35, 33701), (40, 33761), (47, 33809), (50, 33821), (54, 33878), (57, 33893), (60, 33914), (63, 33935),

Gene: LiSara_14 Start: 9657, Stop: 10409, Start Num: 22

Candidate Starts for LiSara_14:

(Start: 22 @9657 has 98 MA's), (42, 9855), (46, 9870), (47, 9879), (63, 10005), (80, 10182), (83, 10212),

Gene: Lilmac1015_45 Start: 31895, Stop: 32452, Start Num: 22

Candidate Starts for Lilmac1015_45:

(Start: 22 @31895 has 98 MA's), (47, 32117), (54, 32186),

Gene: Linus_101 Start: 64523, Stop: 65092, Start Num: 22

Candidate Starts for Linus_101:

(Start: 22 @64523 has 98 MA's), (32, 64604), (37, 64679), (42, 64721), (45, 64733), (47, 64745), (48, 64751), (50, 64757), (57, 64829), (60, 64850), (63, 64871),

Gene: LittleTokyo_52 Start: 31946, Stop: 32464, Start Num: 22

Candidate Starts for LittleTokyo_52:

(5, 31730), (10, 31841), (Start: 22 @31946 has 98 MA's), (30, 32000), (32, 32027), (37, 32102), (40, 32120), (48, 32177), (50, 32183),

Gene: Llemily_57 Start: 42714, Stop: 42016, Start Num: 21

Candidate Starts for Llemily_57:

(Start: 21 @42714 has 22 MA's), (31, 42639), (38, 42552), (47, 42492), (57, 42408), (63, 42366), (65, 42357), (67, 42315), (92, 42156), (95, 42108), (96, 42087),

Gene: Lonelysoil_56 Start: 42870, Stop: 42169, Start Num: 21

Candidate Starts for Lonelysoil_56:

(Start: 21 @42870 has 22 MA's), (31, 42795), (38, 42708), (47, 42648), (57, 42564), (63, 42522), (65, 42513), (67, 42468), (92, 42309), (95, 42261), (96, 42240),

Gene: Lymara_99 Start: 62866, Stop: 63429, Start Num: 22

Candidate Starts for Lymara_99:

(Start: 22 @62866 has 98 MA's), (27, 62890), (32, 62947), (38, 63028), (42, 63064), (47, 63088), (54, 63157), (57, 63172), (60, 63193), (63, 63214),

Gene: Marcie_69 Start: 44119, Stop: 43409, Start Num: 22

Candidate Starts for Marcie_69:

(18, 44155), (Start: 22 @44119 has 98 MA's), (26, 44107), (28, 44083), (35, 44002), (38, 43954), (49, 43885), (55, 43816), (57, 43801),

Gene: Martha_37 Start: 30823, Stop: 31371, Start Num: 22

Candidate Starts for Martha_37:

(12, 30736), (Start: 22 @30823 has 98 MA's), (27, 30847), (40, 30997), (41, 31009), (47, 31045), (60, 31150), (63, 31171), (73, 31255),

Gene: Mashley_58 Start: 43499, Stop: 42783, Start Num: 21

Candidate Starts for Mashley_58:

(Start: 21 @43499 has 22 MA's), (38, 43337), (41, 43313), (47, 43277), (63, 43151), (67, 43100), (85, 42968), (92, 42935), (95, 42884), (96, 42863),

Gene: MellowYellow_93 Start: 57337, Stop: 56732, Start Num: 22

Candidate Starts for MellowYellow_93:

(Start: 22 @57337 has 98 MA's), (30, 57283), (38, 57175), (55, 57043), (56, 57037), (57, 57031),

Gene: Mordred_101 Start: 64114, Stop: 64683, Start Num: 22

Candidate Starts for Mordred_101:

(Start: 22 @64114 has 98 MA's), (32, 64195), (37, 64270), (42, 64312), (47, 64336), (48, 64342), (50, 64348), (57, 64420), (60, 64441), (63, 64462),

Gene: MoyaNatalis_101 Start: 64054, Stop: 64611, Start Num: 22

Candidate Starts for MoyaNatalis_101:

(Start: 22 @64054 has 98 MA's), (27, 64078), (32, 64135), (38, 64216), (42, 64252), (45, 64264), (47, 64276), (48, 64282), (50, 64288), (57, 64360), (63, 64402),

Gene: Mufasa8_48 Start: 36302, Stop: 36853, Start Num: 22

Candidate Starts for Mufasa8_48:

(Start: 22 @36302 has 98 MA's), (32, 36383), (47, 36524), (50, 36536),

Gene: Namago_58 Start: 42834, Stop: 42160, Start Num: 22

Candidate Starts for Namago_58:

(Start: 22 @42834 has 98 MA's), (38, 42672), (41, 42648), (47, 42612), (63, 42486), (67, 42432), (95, 42261), (96, 42240),

Gene: NathanVaag_35 Start: 30573, Stop: 31163, Start Num: 22

Candidate Starts for NathanVaag_35:

(Start: 22 @30573 has 98 MA's), (27, 30597), (47, 30795), (61, 30909), (75, 31044),

Gene: Nike_60 Start: 44258, Stop: 43542, Start Num: 22

Candidate Starts for Nike_60:

(Start: 22 @44258 has 98 MA's), (38, 44096), (41, 44072), (47, 44036), (49, 44027), (63, 43910), (67, 43856), (85, 43730), (87, 43715), (92, 43697), (95, 43643), (96, 43622),

Gene: Odyssey395_96 Start: 57117, Stop: 56512, Start Num: 22

Candidate Starts for Odyssey395_96:

(Start: 22 @57117 has 98 MA's), (30, 57063), (38, 56955), (55, 56823), (56, 56817), (57, 56811), (64, 56766),

Gene: OneinaGillian_63 Start: 43119, Stop: 42412, Start Num: 22

Candidate Starts for OneinaGillian_63:

(Start: 22 @43119 has 98 MA's), (26, 43107), (35, 43002), (38, 42954), (49, 42885), (55, 42816), (57, 42801),

Gene: Orcanus_53 Start: 34413, Stop: 34919, Start Num: 22

Candidate Starts for Orcanus_53:

(7, 34269), (Start: 22 @34413 has 98 MA's), (32, 34494), (40, 34587), (47, 34635), (48, 34641), (57, 34719), (65, 34770),

Gene: Ottawa_81 Start: 48211, Stop: 48849, Start Num: 22

Candidate Starts for Ottawa_81:

(Start: 22 @48211 has 98 MA's), (32, 48292), (57, 48514),

Gene: PSonyx_96 Start: 53094, Stop: 52513, Start Num: 23

Candidate Starts for PSonyx_96:

(15, 53160), (Start: 23 @53094 has 2 MA's), (30, 53040), (42, 52896), (47, 52872),

Gene: Pepe25_62 Start: 42678, Stop: 41956, Start Num: 22

Candidate Starts for Pepe25_62:

(Start: 22 @42678 has 98 MA's), (26, 42666), (28, 42642), (35, 42561), (47, 42453), (49, 42444), (55, 42375), (85, 42087),

Gene: Phabia_57 Start: 43129, Stop: 42431, Start Num: 21

Candidate Starts for Phabia_57:

(Start: 21 @43129 has 22 MA's), (31, 43054), (38, 42967), (47, 42907), (57, 42823), (63, 42781), (65, 42772), (67, 42730), (92, 42571), (95, 42523), (96, 42502),

Gene: Phinky_66 Start: 45167, Stop: 44487, Start Num: 22

Candidate Starts for Phinky_66:

(Start: 22 @45167 has 98 MA's), (38, 45005), (41, 44981), (47, 44945), (49, 44936), (63, 44819), (71, 44714), (95, 44588), (96, 44567),

Gene: PhluffyCoco_55 Start: 33606, Stop: 34115, Start Num: 22

Candidate Starts for PhluffyCoco_55:

(Start: 22 @33606 has 98 MA's), (29, 33645), (32, 33687), (35, 33720), (40, 33780), (47, 33828), (50, 33840), (54, 33897), (57, 33912), (60, 33933), (63, 33954),

Gene: Piccoletto_35 Start: 30574, Stop: 31161, Start Num: 22

Candidate Starts for Piccoletto_35:

(Start: 22 @30574 has 98 MA's), (27, 30598), (47, 30796), (61, 30910), (75, 31045),

Gene: Pippa_37 Start: 30966, Stop: 31526, Start Num: 22

Candidate Starts for Pippa_37:

(Start: 22 @30966 has 98 MA's), (27, 30990), (47, 31188), (60, 31293), (61, 31302), (63, 31314), (73, 31410),

Gene: Pointis_92 Start: 57013, Stop: 56408, Start Num: 22

Candidate Starts for Pointis_92:

(Start: 22 @57013 has 98 MA's), (30, 56959), (38, 56851), (55, 56719), (56, 56713), (57, 56707), (64, 56662),

Gene: Prairie_42 Start: 31210, Stop: 31767, Start Num: 22

Candidate Starts for Prairie_42:

(Start: 22 @31210 has 98 MA's), (47, 31432), (54, 31501), (63, 31558),

Gene: PrincessTrina_102 Start: 64305, Stop: 64874, Start Num: 22

Candidate Starts for PrincessTrina_102:

(Start: 22 @64305 has 98 MA's), (32, 64386), (37, 64461), (42, 64503), (47, 64527), (48, 64533), (50, 64539), (57, 64611), (60, 64632), (63, 64653),

Gene: Pureglobe5_96 Start: 57675, Stop: 57070, Start Num: 22

Candidate Starts for Pureglobe5_96:

(Start: 22 @57675 has 98 MA's), (30, 57621), (38, 57513), (55, 57381), (56, 57375), (57, 57369), (64, 57324),

Gene: Quammi_55 Start: 42829, Stop: 42131, Start Num: 21

Candidate Starts for Quammi_55:

(Start: 21 @42829 has 22 MA's), (31, 42754), (38, 42667), (47, 42607), (57, 42523), (63, 42481), (65, 42472), (67, 42430), (92, 42271), (95, 42223), (96, 42202),

Gene: Ranunculus_85 Start: 57963, Stop: 57334, Start Num: 22

Candidate Starts for Ranunculus_85:

(17, 58008), (Start: 22 @57963 has 98 MA's), (32, 57882), (40, 57789), (62, 57624), (69, 57519),

Gene: RedFox_55 Start: 33605, Stop: 34114, Start Num: 22

Candidate Starts for RedFox_55:

(Start: 22 @33605 has 98 MA's), (32, 33686), (35, 33719), (40, 33779), (47, 33827), (50, 33839), (54, 33896), (57, 33911), (60, 33932), (63, 33953),

Gene: Renna12_54 Start: 33458, Stop: 33970, Start Num: 22

Candidate Starts for Renna12_54:

(Start: 22 @33458 has 98 MA's), (32, 33539), (35, 33572), (40, 33632), (47, 33680), (50, 33692), (54, 33749), (57, 33764), (60, 33785), (63, 33806),

Gene: Rizwana_72 Start: 51720, Stop: 51190, Start Num: 22

Candidate Starts for Rizwana_72:

(Start: 22 @51720 has 98 MA's), (27, 51696), (36, 51579), (47, 51498), (53, 51474), (55, 51423), (57, 51411), (84, 51243),

Gene: RobinRose_65 Start: 43625, Stop: 42924, Start Num: 22

Candidate Starts for RobinRose_65:

(Start: 22 @43625 has 98 MA's), (26, 43613), (35, 43508), (38, 43460), (49, 43391), (55, 43322), (57, 43307),

Gene: RomansRevenge_79 Start: 53660, Stop: 53067, Start Num: 25

Candidate Starts for RomansRevenge_79:

(25, 53660), (33, 53579), (42, 53462), (44, 53453), (54, 53366), (72, 53216), (81, 53165), (82, 53150), (90, 53108), (93, 53081),

Gene: Romm_65 Start: 43622, Stop: 42921, Start Num: 22

Candidate Starts for Romm_65:

(Start: 22 @43622 has 98 MA's), (26, 43610), (35, 43505), (38, 43457), (49, 43388), (55, 43319), (57, 43304),

Gene: RosiePosie_101 Start: 64170, Stop: 64727, Start Num: 22

Candidate Starts for RosiePosie_101:

(Start: 22 @64170 has 98 MA's), (28, 64206), (32, 64251), (34, 64266), (45, 64380), (47, 64392), (50, 64404), (57, 64476), (60, 64497), (63, 64518),

Gene: Rowlf_54 Start: 42772, Stop: 42059, Start Num: 21

Candidate Starts for Rowlf_54:

(Start: 21 @42772 has 22 MA's), (38, 42610), (41, 42586), (47, 42550), (63, 42424), (67, 42370), (85, 42244), (92, 42208), (95, 42160), (96, 42139),

Gene: RubyRalph_61 Start: 45401, Stop: 44676, Start Num: 21

Candidate Starts for RubyRalph_61:

(Start: 21 @45401 has 22 MA's), (47, 45179), (63, 45053), (66, 45011),

Gene: Ruchi_52 Start: 33757, Stop: 34278, Start Num: 22

Candidate Starts for Ruchi_52:

(Start: 22 @33757 has 98 MA's), (32, 33838), (47, 33979), (48, 33985), (65, 34114),

Gene: Rudy_55 Start: 42865, Stop: 42167, Start Num: 21

Candidate Starts for Rudy_55:

(Start: 21 @42865 has 22 MA's), (31, 42790), (38, 42703), (47, 42643), (57, 42559), (63, 42517), (65, 42508), (67, 42466), (92, 42307), (95, 42259), (96, 42238),

Gene: SadLad_62 Start: 46174, Stop: 45440, Start Num: 21

Candidate Starts for SadLad_62:

(Start: 21 @46174 has 22 MA's), (47, 45952), (63, 45826), (66, 45784), (78, 45664),

Gene: Salgado_14 Start: 9631, Stop: 10362, Start Num: 22

Candidate Starts for Salgado_14:

(Start: 22 @9631 has 98 MA's), (42, 9829), (46, 9844), (47, 9853), (63, 9979), (80, 10135), (83, 10165),

Gene: SallyK_59 Start: 44086, Stop: 43373, Start Num: 22

Candidate Starts for SallyK_59:

(Start: 22 @44086 has 98 MA's), (38, 43924), (41, 43900), (47, 43864), (63, 43738), (67, 43684), (85, 43555), (92, 43522), (95, 43474), (96, 43453),

Gene: Scavito_102 Start: 64163, Stop: 64732, Start Num: 22

Candidate Starts for Scavito_102:

(Start: 22 @64163 has 98 MA's), (32, 64244), (37, 64319), (42, 64361), (47, 64385), (48, 64391), (50, 64397), (57, 64469), (60, 64490), (63, 64511),

Gene: Shade_37 Start: 30810, Stop: 31367, Start Num: 22

Candidate Starts for Shade_37:

(12, 30723), (Start: 22 @30810 has 98 MA's), (27, 30834), (46, 31023), (47, 31032), (60, 31137), (61, 31146), (63, 31158), (73, 31251),

Gene: Shrooms_14 Start: 9704, Stop: 10450, Start Num: 22

Candidate Starts for Shrooms_14:

(Start: 22 @9704 has 98 MA's), (37, 9860), (42, 9902), (47, 9926), (57, 10010), (88, 10271),

Gene: Sicarius2_38 Start: 30424, Stop: 30954, Start Num: 22

Candidate Starts for Sicarius2_38:

(Start: 22 @30424 has 98 MA's), (38, 30586), (40, 30598), (47, 30646), (52, 30667),

Gene: SilentRX_70 Start: 50764, Stop: 50189, Start Num: 22

Candidate Starts for SilentRX_70:

(Start: 22 @50764 has 98 MA's), (32, 50683), (41, 50578), (42, 50566), (47, 50542), (55, 50470),

Gene: Sillytadpoles_58 Start: 42702, Stop: 42004, Start Num: 21

Candidate Starts for Sillytadpoles_58:

(Start: 21 @42702 has 22 MA's), (31, 42627), (38, 42540), (47, 42480), (57, 42396), (63, 42354), (65, 42345), (67, 42303), (92, 42144), (95, 42096), (96, 42075),

Gene: SoJo_44 Start: 31978, Stop: 32505, Start Num: 23

Candidate Starts for SoJo_44:

(1, 31687), (2, 31702), (6, 31795), (11, 31876), (13, 31885), (Start: 23 @31978 has 2 MA's), (39, 32146), (48, 32206), (51, 32215), (63, 32323), (91, 32485),

Gene: Sonali_48 Start: 38621, Stop: 39217, Start Num: 22

Candidate Starts for Sonali_48:

(Start: 22 @38621 has 98 MA's), (41, 38807), (49, 38852), (57, 38927),

Gene: Sonny_37 Start: 30840, Stop: 31397, Start Num: 22

Candidate Starts for Sonny_37:

(12, 30753), (Start: 22 @30840 has 98 MA's), (27, 30864), (46, 31053), (47, 31062), (60, 31167), (61, 31176), (63, 31188), (73, 31281),

Gene: Squash_62 Start: 44406, Stop: 43699, Start Num: 21

Candidate Starts for Squash_62:

(Start: 21 @44406 has 22 MA's), (31, 44331), (38, 44244), (47, 44184), (57, 44100), (63, 44058), (65, 44049), (67, 44007), (70, 43956), (85, 43881), (92, 43848), (95, 43800), (96, 43779),

Gene: StevieBAY_37 Start: 30898, Stop: 31446, Start Num: 22

Candidate Starts for StevieBAY_37:

(Start: 22 @30898 has 98 MA's), (27, 30922), (47, 31120), (61, 31234), (63, 31246), (73, 31324),

Gene: StrawberryJamm_62 Start: 43175, Stop: 42492, Start Num: 21

Candidate Starts for StrawberryJamm_62:

(Start: 21 @43175 has 22 MA's), (38, 43013), (41, 42989), (47, 42953), (49, 42944), (63, 42827), (67, 42773), (70, 42722), (85, 42647), (95, 42593), (96, 42572),

Gene: TaeYoung_37 Start: 30823, Stop: 31371, Start Num: 22

Candidate Starts for TaeYoung_37:

(12, 30736), (Start: 22 @30823 has 98 MA's), (27, 30847), (40, 30997), (41, 31009), (47, 31045), (60, 31150), (63, 31171), (73, 31255),

Gene: Tank_72 Start: 51819, Stop: 51199, Start Num: 22

Candidate Starts for Tank_72:

(Start: 22 @51819 has 98 MA's), (27, 51795), (32, 51738), (47, 51597), (58, 51513),

Gene: TaylorSipht_54 Start: 34187, Stop: 34702, Start Num: 22

Candidate Starts for TaylorSipht_54:

(Start: 22 @34187 has 98 MA's), (32, 34268), (48, 34415), (50, 34421), (57, 34493), (60, 34514), (65, 34544),

Gene: Teehee_58 Start: 43935, Stop: 43237, Start Num: 21

Candidate Starts for Teehee_58:

(Start: 21 @43935 has 22 MA's), (31, 43860), (38, 43773), (47, 43713), (57, 43629), (63, 43587), (65, 43578), (67, 43536), (92, 43377), (95, 43329), (96, 43308),

Gene: Tempo_64 Start: 43508, Stop: 42789, Start Num: 22

Candidate Starts for Tempo_64:

(18, 43544), (Start: 22 @43508 has 98 MA's), (26, 43496), (35, 43391), (38, 43343), (49, 43274), (55, 43205), (57, 43190),

Gene: Timinator_37 Start: 30897, Stop: 31436, Start Num: 22

Candidate Starts for Timinator_37:

(Start: 22 @30897 has 98 MA's), (27, 30921), (47, 31119), (63, 31245), (77, 31344),

Gene: Tissue_58 Start: 43778, Stop: 43071, Start Num: 21

Candidate Starts for Tissue_58:

(Start: 21 @43778 has 22 MA's), (31, 43703), (38, 43616), (47, 43556), (57, 43472), (63, 43430), (65, 43421), (67, 43379), (92, 43220), (95, 43172), (96, 43151),

Gene: Tophat_102 Start: 64352, Stop: 64921, Start Num: 22

Candidate Starts for Tophat_102:

(Start: 22 @64352 has 98 MA's), (32, 64433), (37, 64508), (42, 64550), (47, 64574), (48, 64580), (50, 64586), (57, 64658), (60, 64679), (63, 64700),

Gene: Vibaki_38 Start: 32552, Stop: 33103, Start Num: 22

Candidate Starts for Vibaki_38:

(Start: 22 @32552 has 98 MA's), (27, 32576), (38, 32714), (47, 32774), (50, 32786),

Gene: Viceroy_56 Start: 42835, Stop: 42137, Start Num: 21

Candidate Starts for Viceroy_56:

(Start: 21 @42835 has 22 MA's), (31, 42760), (38, 42673), (47, 42613), (57, 42529), (63, 42487), (65, 42478), (67, 42436), (92, 42277), (95, 42229), (96, 42208),

Gene: Vulpecula_52 Start: 33417, Stop: 33938, Start Num: 22

Candidate Starts for Vulpecula_52:

(Start: 22 @33417 has 98 MA's), (32, 33498), (47, 33639), (48, 33645), (65, 33774),

Gene: Waltz_14 Start: 9797, Stop: 10513, Start Num: 22

Candidate Starts for Waltz_14:

(Start: 22 @9797 has 98 MA's), (32, 9878), (40, 9971), (42, 9995), (47, 10019), (63, 10145), (88, 10352),

Gene: Wayne3_59 Start: 43698, Stop: 43000, Start Num: 21

Candidate Starts for Wayne3_59:

(Start: 21 @43698 has 22 MA's), (31, 43623), (38, 43536), (47, 43476), (57, 43392), (63, 43350), (65, 43341), (67, 43299), (92, 43140), (95, 43092), (96, 43071),

Gene: Wheelbite_14 Start: 9719, Stop: 10477, Start Num: 22

Candidate Starts for Wheelbite_14:

(Start: 22 @9719 has 98 MA's), (46, 9932), (47, 9941), (63, 10067), (83, 10280),

Gene: Wheelie_57 Start: 43019, Stop: 42321, Start Num: 21

Candidate Starts for Wheelie_57:

(Start: 21 @43019 has 22 MA's), (31, 42944), (38, 42857), (47, 42797), (57, 42713), (63, 42671), (65, 42662), (67, 42620), (92, 42461), (95, 42413), (96, 42392),

Gene: Wilca_64 Start: 43759, Stop: 43046, Start Num: 22

Candidate Starts for Wilca_64:

(Start: 22 @43759 has 98 MA's), (26, 43747), (28, 43723), (35, 43642), (38, 43594), (43, 43555), (55, 43456), (59, 43435),

Gene: Wilde_74 Start: 52160, Stop: 51552, Start Num: 22

Candidate Starts for Wilde_74:

(Start: 22 @52160 has 98 MA's), (27, 52136), (32, 52079), (47, 51938), (58, 51854),

Gene: Wyborn_38 Start: 31062, Stop: 31586, Start Num: 22

Candidate Starts for Wyborn_38:

(Start: 22 @31062 has 98 MA's), (38, 31224), (40, 31236), (47, 31284), (52, 31305), (64, 31413),

Gene: Zagie_58 Start: 43363, Stop: 42659, Start Num: 22

Candidate Starts for Zagie_58:

(Start: 22 @43363 has 98 MA's), (38, 43201), (41, 43177), (47, 43141), (63, 43015), (67, 42961), (85, 42832), (92, 42799), (95, 42751), (96, 42730),

Gene: Zartrosa_37 Start: 30749, Stop: 31297, Start Num: 22

Candidate Starts for Zartrosa_37:

(12, 30662), (Start: 22 @30749 has 98 MA's), (27, 30773), (47, 30971), (60, 31076), (73, 31181),

Gene: Zhafia_60 Start: 43499, Stop: 42801, Start Num: 21

Candidate Starts for Zhafia_60:

(Start: 21 @43499 has 22 MA's), (31, 43424), (38, 43337), (47, 43277), (57, 43193), (63, 43151), (65, 43142), (67, 43100), (92, 42941), (95, 42893), (96, 42872),